

Date: Wednesday, 10/3/2007 8:36:35 AM
 User: Kim Johnston

Process Sheet

44

Customer : CU-DAR001 Dart Helicopters Services Drawing Name : SHORT STEP ASSEMBLY LOW SKID LH
 Job Number : 34977
 Estimate Number : 12365
 P.O. Number : N/A Part Number : D350591215
 This Issue : 10/3/2007 S.O. No. : N/A Drawing Number : D3168 REV A
 Prsht Rev. : NC Project Number : N/A
 First Issue : N/A Type : LARGE FAB ASSY Drawing Revision : A
 Previous Run : 30844 Material : N/A
 Due Date : 10/30/2007 Qty: 3 Um: Each
 Written By : 07.10.03
 Checked & Approved By : 07.10.03
 Comment : Est Rev: A 02.10.17 New issue KJ/RF
 Est Rev: B 06-06-19 Added D2732-030 AS PER DSI9294
 JLM
 Est Rev: C 06-06-27 Revised as per DSI9340 JLM

Additional Product

Job Number:



Seq. #: Machine Or Operation: Description :

1.0 DC DOCUMENT CONTROL



KS 07.10.03

Comment: DOCUMENT CONTROL

Photocopy bluefile and type labels as per PPP D350-591-215 CHG002

07.10.18

2.0 D2622120C Extrusion



Comment: Qty.: 0.5000 Each(s)/Unit Total : 1.5000 Each(s)

EXTRUSION

Batch 332858

07.10.18

3.0 LARGE FAB 1 LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Cut D2622-120C extrusion to 57.090" long as per Dwg D3168

2-Drill extrusion as per Dwg D3168 using Jig DT8680 for rivets.(Use only 1st 6holes)

3-Deburr

07.10.18 3

07.10.18 3

07.10.18 3

4.0 QC5 INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07.10.18 3

| W/O: | | WORK ORDER CHANGES | | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|--|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector | |
| | | | | | | | | |
| | | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Date: Wednesday, 10/3/2007 8:36:35 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY LOW SKID LH

Job Number: 34977

Part Number: D350591215

Job Number:



Seq. #:

Machine Or Operation:

Description :

5.0

D30671

End Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 3.0000 Each(s)

END PLATE

Batch

~~334454~~
B35079

SE 07.10.18 3

6.0

D31691

Support



Comment: Qty.: 1.0000 Each(s)/Unit Total : 3.0000 Each(s)

SUPPORT

Batch

~~325200 = 1~~
B26685 = 2

SE 07.10.18 3

7.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Bevel end for welding FWD ONLY

2-Weld Support using Jig DT8781, weld Fwd End Plate as per QSI 004 & Dwg D3168

A/R Aluminum Rod ~~M103794~~
M105058

3-Grind End Plate flush

SE 07.10.18 3

SE 07.10.18 3

SE 07.10.22 3

8.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

12/07/19/23 (3)

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

SE 07/10/23 (3) LH

10.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

SAD 07-10-23 (3)

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Date: Wednesday, 10/3/2007 8:36:35 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY LOW SKID LH

Job Number: 34977

Part Number: D350591215

Job Number:



Seq. #:

Machine Or Operation:

Description :

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

M-L *07/10/23* *(2x)*

12.0

D30771

Step Leg



Comment: Qty.: 2.0000 Each(s)/Unit Total : 6.0000 Each(s)

STEP LEG

Batch

B26684

a.m 07.11.26

3

13.0

D31701

Spacer



Comment: Qty.: 2.0000 Each(s)/Unit Total : 6.0000 Each(s)

SPACER

Batch

B266 23578

a.m 07.11.26

3

14.0

MS20600AD4W4

Rivets



Comment: Qty.: 12.0000 Each(s)/Unit Total : 36.0000 Each(s)

RIVET

Batch

M10595P

a.m 07.11.26

3

15.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

Rivet Leg Assembly as per Dwg D3168

a.m 07.11.26

P

16.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

C *7/11/27* *(x3 LH)*

17.0

D30671

End Plate



Comment: Qty.: 1.0000 Each(s)/Unit Total : 3.0000 Each(s)

END PLATE

Batch

335079

2/11/27 *3*

18.0

LARGE FAB 1

LARGE FABRICATION RESOURCE 1



Comment: LARGE FABRICATION RESOURCE 1

1-Bevel Aft end for welding

2/11.27 *3*

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Date: Wednesday, 10/3/2007 8:36:35 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY LOW SKID LH

Job Number: 34977

Part Number: D350591215

Job Number:



Seq. #:

Machine Or Operation:

Description :

2-Inspect for foreign object as per QSI 024

3-Weld Aft End Plate as per QSI 004 & Dwg D3168

A/R Aluminum Rod M105058

4-Grind End Plate flush

a.m. 07.11.27

07.11.27 3

07.11.27 3

3

19.0

QC9

VISUAL WELDING INSPECTION



Comment: VISUAL WELDING INSPECTION

07.11.28 (3)

20.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

07.11.28 (3 LH)

21.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Touch Up Chemical conversion

m.p. 07/11/28

(3 LH)

22.0

POWDER COATING

POWDER COATING



M105914



(3x LH)

Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

m.p. 07/11/28

23.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



M106030



(3x LH)

Comment: HAND FINISHING RESOURCE #1

Wing Walk as per Dwg D3168 and QSI 005 4.4

m.p. 07/11/29

24.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: Inspect Powder Coat and Wing Walk

07.11.30 (3 LH)

25.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Pick Packing Kit

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Date: Wednesday, 10/3/2007 8:36:35 AM
User: Kim Johnston

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY LOW SKID LH

Job Number: 34977

Part Number: D350591215

Job Number:



Seq. #:

Machine Or Operation:

Description :

26.0

D22301

Mounting Lug



Comment: Qty.: 2.0000 Each(s)/Unit Total : 6.0000 Each(s)

CLAMP

Batch

M32163

SC

(X3)

27.0

D22303

Mounting Lug



Comment: Qty.: 2.0000 Each(s)/Unit Total : 6.0000 Each(s)

CLAMP

Batch

M354701

SC

(X3)

28.0

D2732

Rubber Extrusion



Comment: Qty.: 0.5000 f(s)/Unit Total : 1.5000 f(s)

Rubber Extrusion

2 X 3"

Batch:

B34717

SC

(X3)

29.0

D2856400

Abrasion Strip



Comment: Qty.: 0.6000 f(s)/Unit Total : 1.8000 f(s)

ABRASION STRIP

1 D2856-400 (7.2") Abrasion Strip Batch

B34642

SC

(X3)

30.0

AN335A

Bolt



Comment: Qty.: 2.0000 Each(s)/Unit Total : 6.0000 Each(s)

BOLT

Batch

M105408

M105408

SC

(X3)

31.0

AN411A

Bolt



Comment: Qty.: 6.0000 Each(s)/Unit Total : 18.0000 Each(s)

BOLT

Batch

M102280

SC

(X3)

32.0

AN413A

Bolt



Comment: Qty.: 4.0000 Each(s)/Unit Total : 12.0000 Each(s)

Bolt

Batch:

M106043

7/11/29 SC

(X3)

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☒ No ☐ DQA: D Date: 07/12/04
 QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|--------------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: SHORT STEP ASSEMBLY LOW SKID LH

Job Number: 34977

Part Number: D350591215

Job Number:



Seq. #:

Machine Or Operation:

Description :

33.0

AN960JD10

Washer



Comment: Qty.: 4.0000 Each(s)/Unit Total : 12.0000 Each(s)

WASHER

Batch

M105792

sq

34.0

AN960JD416

Washer



Comment: Qty.: 12.0000 Each(s)/Unit Total : 36.0000 Each(s)

WASHER

Batch

M105906

sq

35.0

MS21042L3

Nut



Comment: Qty.: 2.0000 Each(s)/Unit Total : 6.0000 Each(s)

NUT

Batch

M102658

sq

36.0

MS21042L4

Nut



Comment: Qty.: 6.0000 Each(s)/Unit Total : 18.0000 Each(s)

NUT

Batch

M105034

7/11/29

sq

(3x)

37.0

QC4

INSPECT 100% KITS FOR COMPLETENESS



Comment: INSPECT 100% KITS FOR COMPLETENESS

07/11/30 (x2)

38.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and pack for shipping as per PPP D350-591-215

Location:

PPP Rev:

B

11/20/29

07/11/30

(x3)

39.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

07/12/04

Job Completion



11/27/04

Dart Aerospace Ltd

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |

NOTE: Date & initial all entries



| | | | |
|-------------------------------|--------------------------------|--|------------------------|
| DESIGN <i>OP</i> | DRAWN BY <i>OP</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>[Signature]</i> | APPROVED <i>[Signature]</i> | DRAWING NO. D3168 | REV. A SHEET 1 OF 2 |
| DATE 02.09.11 | | TITLE STEP ASSEMBLY, LOW SHORT SCALE NTS | |
| A | 02.09.11 | NEW ISSUE | |

RELEASED
02.09.20 *[Signature]*

| Part No. | Description | QTY -041 | QTY -042 |
|--------------|-------------------------------|-------------|-------------|
| D3168-041 | Step Assembly, Low Short (LH) | X | |
| D3168-042 | Step Assembly, Low Short (RH) | | X |
| D2622-60 | STEP EXTRUSION | 1 | 1 |
| D3067-1 | END PLATE | 2 | 2 |
| D3077-1 | STEP LEG | 2 | 2 |
| D3169-1 | SUPPORT | 1 | 1 |
| D3170-1 | SPACER | 2 | 2 |
| MS20600AD4W4 | RIVET | 12 | 12 |

GENERAL NOTES:

- 1) -041 SHOWN, FOR -042 INSTALL D3169-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 34977

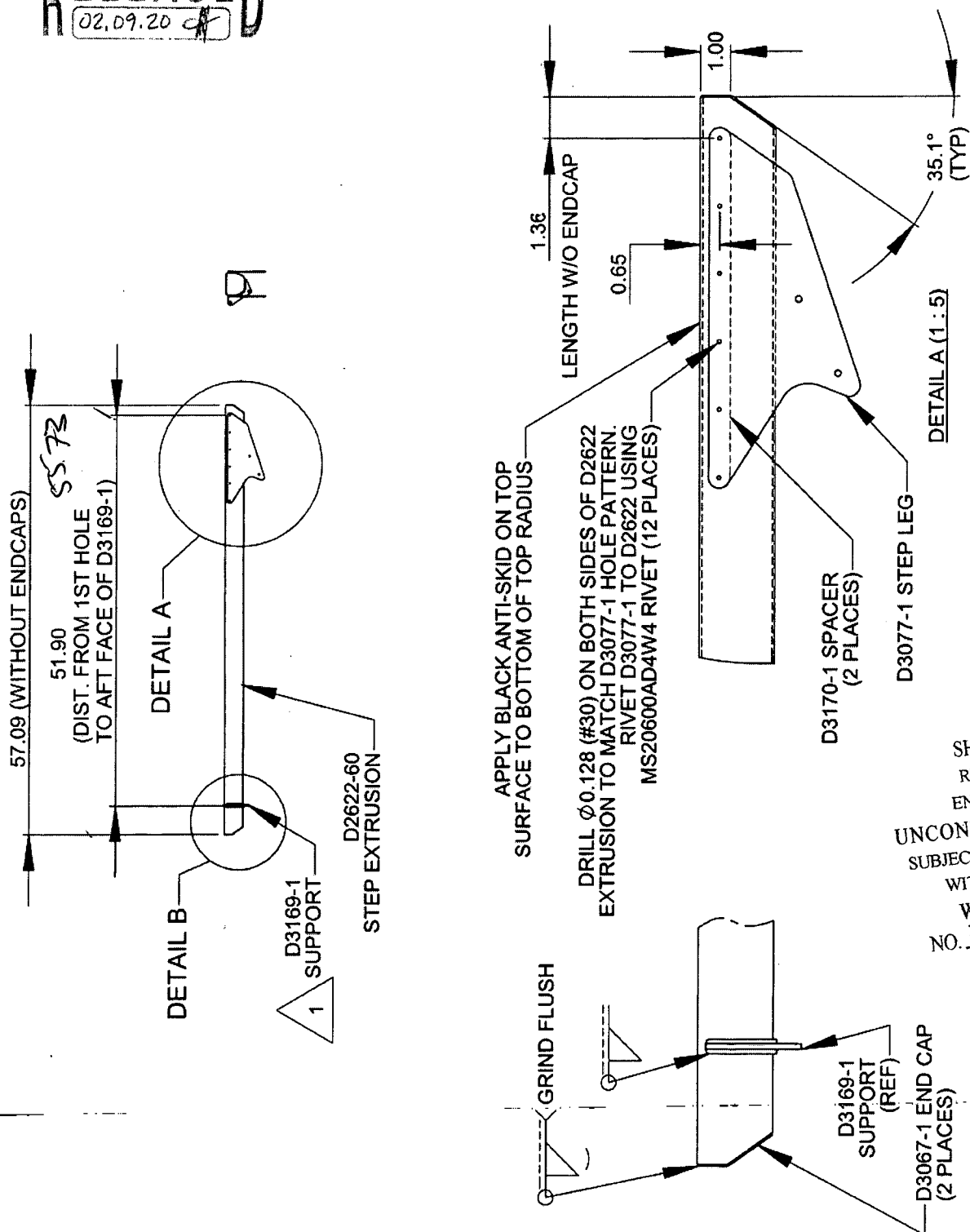
COPYRIGHT © 2002 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.



| | | | |
|----------------------|-----------------------|---|------------------------|
| DESIGN <i>UP</i> | DRAWN BY <i>UP</i> | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>AF</i> | APPROVED <i>AF</i> | DRAWING NO. D3168 | REV. A SHEET 2 OF 2 |
| DATE 02.09.11 | | TITLE STEP ASSEMBLY, LOW SHORT | SCALE 1:20 |

RELEASED
02.09.20 *AF*



SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 34977

COPYRIGHT © 2002 BY DART AEROSPACE LTD.

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.